

Remarks

This communication is considered fully responsive to the first Office Action mailed September 8, 2004. Claims 1-29 were examined. Claims 1-29 stand rejected. Claims 1, 9, 11-13, 17, 21, and 24 are amended. Claims 10, 20, and 27 are canceled. No new claims have been added. Reexamination and reconsideration of claims 1-9, 11-19, 21-26, and 28-29 are respectfully requested.

Claim Rejections - 35 U.S.C. 103(a)

The Office Action rejected claims 1-29 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,408,406 to Parris (hereinafter referred to as "Parris") in view of U.S. Patent No. 6,401,214 to Li (hereinafter referred to as "Li"). The Applicant respectfully traverses this rejection.

Claim 1 is amended to positively recite "responding . . . by automatically reallocating at least some data on said storage device" (emphasis added). Parris and Li fail to teach or suggest at least this recitation.

The examiner agrees on page 3 of the Office Action that "Parris does not explicitly teach: - responding to a decline in the performance of storage device based on analyzed intercepted communications," other than by marking the disk drive as a failed disk drive. Instead, the Office Action cites to Li as teaching preventive recovery operation modes. However, the preventative recovery operation modes disclosed in Li do not teach or suggest automatically reallocating at least some data on the storage device.

For at least the foregoing reasons claim 1 is believed to be allowable over the cited references and Applicant respectfully requests withdrawal of the rejection of claim 1.

Claim 10 is canceled. Claims 2-9 and 11-12 depend from claim 1, which is believed to be allowable. Therefore, claims 2-9 and 11-12 are also believed to be allowable for at least the same reasons as claim 1. Withdrawal of the rejection of claims 2-9 and 11-12 is respectfully requested.

In addition, claim 3 further recites "correcting said measured access time for system overhead." The Office Action cites to Col. 8, lines 34-59 in Parris as disclosing this recitation. However, this citation only discloses "corrected and uncorrected write errors" and has nothing to do with correcting a measured access time for system overhead.

Claim 5 further recites "determining an access location on said storage device and an access frequency for data stored thereon based on said intercepted communications." The Office Action cites to Col. 3, lines 1-12 in Parris as disclosing this recitation. However, this citation only discloses "non-destructive read/write tests" and has nothing to do with determining an access location and access frequency based on intercepted communications.

Claim 6 further recites "determining an access location on said storage device and an access duration for data stored thereon based on said intercepted communications." The Office Action cites to Col. 3, lines 7-12 in Parris as

disclosing this recitation. Again, this citation only discloses “non-destructive read/write tests,” and does not teach or suggest the claimed recitation.

Claim 9 positively recites “automatically backing-up data stored on said storage device.” The Office Action cites to Figure 3 and Col. 5, lines 26-52 as disclosing this recitation. However, Figure 3 is merely “an illustration of a portion of a data surface of a hard disk drive, showing zone regions on the disk.” See, e.g., Brief Description of the Drawings at Col. 3, lines 61-62. The discussion at Col. 5, lines 26-52 describes how data is stored on the hard disk drive surface. There is no teaching or suggestion of automatically backing-up data.

Claim 11 positively recites “reallocating at least some data on said storage device is based on usage patterns of said data.” Again, the Office Action cites to Figure 3 and Col. 5, lines 26-52. As discussed above for claim 9, Figure 3 shows a hard disk drive and the discussion at Col. 5, lines 26-52 describes how data is stored on the hard disk drive surface, but there is not teaching or suggestion of reallocating data, much less doing so based on usage patterns of the data. The Office Action also cites to Figures 3 and 5, and Col. 1, lines 25-30 as describing “usage patterns of data.” However, this citation instead describes a defect discovery procedure wherein defective data sites are identified by comparing the data pattern read from the disk surface with the known data pattern written to the disk surface and has nothing to do with reallocating data based on usage patterns of the data.

Claim 12 further recites "defragmenting at least a portion of said storage device." The Office Action cites to Col. 5, line 39 through Col. 6, line 14 as disclosing this recitation. This citation describes the hard disk drive shown in Figure 3, but fails to teach or suggest defragmenting the storage device.

The Office Action rejected claims 13-23 on the same basis as claims 1-12. However, claim 13 is amended to positively recite "program code for responding to a decline in the performance of said storage device prior to said predicted failure by backing up at least some data on said storage device prior to failure of said storage device" (emphasis added). Parris and Li fail to teach or suggest at least this recitation as discussed above for claim 9.

For at least the foregoing reasons claim 13 is believed to be allowable over the cited references and Applicant respectfully requests withdrawal of the rejection of claim 13.

Claim 20 is canceled. Claims 14-19 and 21-23 depend from claim 13, which is believed to be allowable. Therefore, claims 14-19 and 21-23 are also believed to be allowable for at least the same reasons as claim 13. Withdrawal of the rejection of claims 14-19 and 21-23 is respectfully requested.

Furthermore, the dependent claims include additional recitations that are neither taught nor suggested by the cited references, as discussed above in more detail with regard to the claims depending from claim 1. Claims 14-19 and 21-23 are therefore also believed to be allowable on these separate grounds.

The Office Action rejected claims 24-27 on the same basis as claims 1-12. However, claim 24 is amended to positively recite “means for responding to a decline in the performance of said storage device prior to a predicted failure thereof by reallocating at least some data on the storage device” (emphasis added). Parris and Li fail to teach or suggest at least this recitation as discussed above for claim 1.

For at least the foregoing reasons claim 24 is believed to be allowable over the cited references and Applicant respectfully requests withdrawal of the rejection of claim 24.

Claim 27 is canceled. Claims 25-26 depend from claim 24, which is believed to be allowable. Therefore, claims 25-26 are also believed to be allowable for at least the same reasons as claim 24. Withdrawal of the rejection of claims 25-26 is respectfully requested.

The Office Action rejected claims 28 and 29 on the same basis as claims 1, 5-6, and 10. However, claim 28 positively recites “reallocating at least some of said data on said storage device to enhance the performance of said storage device based on said analyzed communications” (emphasis added). Parris and Li fail to teach or suggest at least this recitation as discussed above for claim 1.

For at least the foregoing reasons claim 28 is believed to be allowable over the cited references and Applicant respectfully requests withdrawal of the rejection of claim 28.

Claim 29 depends from claim 28 and therefore claim 29 is believed to be allowable for at least the same reasons as claim 28. Withdrawal of the rejection of claim 29 is respectfully requested.

Furthermore, claim 29 positively recites "determining access location, access frequency, and access duration for said data on said storage device." As discussed above for claims 5 and 6, at least this recitation is not taught or even suggested by the cited references. Therefore, claim 29 is believed to be allowable on these separate grounds.

Conclusion

The Applicant respectfully requests that a timely Notice of Allowance be issued in this matter.

Respectfully Submitted,

Dated: Nov. 16, 2004

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